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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,580	04/26/2007	Chris Abbot	ABBO3004/FJD	4334
23364 7590 01/28/2010 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
VILLA, JOSE F				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/585,580

Applicant(s)

ABBOT, CHRIS

Examiner

JOSE VILLA

Art Unit

2463

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Claims 12-14 and 19-20 were canceled.

Response to Arguments

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., The converter unit is a supervisory control and data acquisition interface for tank or process monitoring, also other i.e., various communication protocols or communication technologies, such as, e.g. Whessoematic WM550, Varec Mark/Space, Sakura Vi, Tiway, etc., which are especially adapted for data transmission over relatively long signal lines") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's arguments with respect to claim 11 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 11 and 16 are** rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0023795 to *Packwood et al* (*Packwood*) in view of U.S. Patent Application Publication No. 20005/0072239 to Longsdorf et al. ("*Longsdorf*"), in view U.S. Patent No. 6,640,308 to *Keyghobad et al.* ("*Keyghobad*")

As to claim 11, Packwood disclose a process installation having: a control room (controller/central host/ handheld, paragraph 5 9 21 22 36, figs. 1, 2); and a plurality of sensors (where the field devices can be sensor valves, transmitters, etc.; paragraph 2-4, 21, 23) connected to converter units (where the smart field device has both function of a sensor and a converter unit, where the smart field device will also transmits data to the control room (central location/workstation; paragraph 2, 4, 5, 9-10, 20); from which a signal line leads to said control room (field device connect to central location/workstation over bus/line 30, fig.1; paragraph 10, 20, 21, 23-25) and which exchange data with said control room via said signal line SL (where the field device exchange data with the central location /workstation (control room) paragraph 9-10, 20, 21, 23-25, wherein: said signal line SL is designed for a conventional first data transmission technology having a low data transmission rate (where the first transmission technology (HART) has low speed/rate, and lower transmission rate than second technology transmission (Fieldbus), paragraph 9 31, 33); at least one converter unit (a smart field device, paragraph 20 26), for data exchange, (exchange

data with controller/central host/handheld over the bus#30, fig.1, paragraph 5 9 21 23 36) operates with a second data transmission technology (field devices using 2nd transmission technology (Foundation "Fieldbus"), paragraph 9 20 26, 32-33, 36 47) which permits a greater data transmission rate and/or an expanded functionality than the first transmission technology (where Fieldbus has a higher transmission rate than the first communication protocol (HART), paragraph 33) and which uses, as a communication medium, the existing signal line SL (where both protocol uses the same bus #30, fig. 1, paragraphs 9 10 20 24 30 32 36-37 47); the first and second data transmission technologies use separate data transmission channels occupying different frequency bands; (where both channel use different frequencies/data rates therefore using different channel with different frequency band, paragraph 9 20 31 33) and the first data transmission channel occupies a frequency band up to 4 kHz (HART frequency about 1kHz-2.2kHz; paragraph 31), and the second data transmission channel occupies a frequency range greater than 4 kHz ,(where Fieldbus is much more grader than HART, where it's known in the art that Fieldbus has much more frequency range than Hart, paragraph 33). Although Packwood disclose a field device that can be a sensor and has also the function of an converter unit (two known functions/devices in a single device, and where the field device uses a 2-wire line to communicate to other devices, paragraph 2, 4-5, 9-10, 21, 24), Packwood doe not explicitly discloses plurality of sensors which are connected via 2-wire lines with a plurality of converter units.

Longsdorf discloses a system that has devices that are connected via a 2-wire line, the system has sensors (fig. 1, 2) which are connected via 2-wire lines a converter units (which can be a transmitter 12 or communicator 26, which are connected over a 2 wire line using Hart, Fieldbus or other digital or analogue communication, paragraph 14, 17, 19-22).

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use Longsdorf teaching into Packwood. The suggestion/motivation would have been to have a 2-wire line in order to Hart, Fieldbus or other digital or analogue communication so that the controller, transmitter or communicator to send information to the control room (paragraph 14, 17, 19-22).

Packwood and Longsdorf do not explicitly disclose that a smaller than 10,000 baud)

Keyghobad discloses that a HART has a baud of 1200 with is smaller than 10000 baud (col. 1 ll.45-49)

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use *Keyghobad* teaching of a Hart being smaller than a 10000 baud into Packwood. The suggestion/motivation would have been to have a low rate for the transmission of data over the signal line, (col. 1 ll.45-49- *Keyghobad*; paragraph 30 33 Packwood)

As to claim 16, Packwood disclose wherein said first data transmission technology operates according to an industrial standard, e.g. Whessoematic WM550, Varec

Mark/Space, Sakura V1, Tiway, Profibus, HART, FF. (first data transmission technology is HART, paragraph 20, 30-31)

1. **Claim 15 and 17 are rejected** under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0023795 to Packwood et al. (Packwood) in view of U.S. Patent Application Publication No. 20005/0072239 to Longsdorf et al. ("Longsdorf"), in view U.S. Patent No. 6,640,308 to Keyghobad et al. ("Keyghobad") in further view of U.S. Patent Application Publication No. 2004/02400464 to Fite.

As to claim 15, Packwood and Keyghobad does not explicitly disclose wherein: said signal line SL is a copper 2-wire line with a bandwidth of about 1 MHz.

Fite discloses a signal line SL is a copper 2-wire line (twisted pair wire, paragraph 4) with a bandwidth of about 1 MHz (where the bandwidth of the twisted pair can be 1.1MHz or more, paragraph 4-5)

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use the teaching of Fite of "a copper 2-wire line with a bandwidth of about 1 MHz" into Packwood. The suggestion/motivation would have been to have a high bandwidth twisted pair wire to provide high speed data rate so that the wire can provide other transmission technologies such as ADSL that are at higher speed rate (paragraph 4-5).

As to claim 17, Packwood and Keyghobad do not explicitly disclose said second data transmission technology corresponds to DSL (digital subscriber line) technology.

Fite discloses that a second data transmission technology corresponds to DSL (digital subscriber line) technology (where on a twisted pair wire DSL can also be transmitted, paragraph 4-5 7)

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use the teaching of Fite of "using DSL" into Packwood. The suggestion/motivation would have been to have high speed data rate transmission technology such as ADSL/DSL over the same twisted pair wire (paragraph 4-5 7).

2. **Claim 18 is rejected** under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0023795 to Packwood et al. (Packwood) in view of U.S. Patent Application Publication No. 20005/0072239 to Longsdorf et al. ("Longsdorf"), in view U.S. Patent No. 6,640,308 to *Keyghobad* et al. ("Keyghobad") in further view of U.S. Patent No.6, 307,483 to Westfield et al ("Westfield").

As to claim 18, Packwood discloses that the field devices can be devices that control and monitor sensors, transmitter, current pressure valve, etc (paragraph 2-3) but does not explicitly disclose where in the process installation, is a tank farm with a plurality of tanks LC1, LC2, LC3, LC4, LC5 for containing liquid.

Westfield discloses system that is a tank farm with a plurality of tanks LC1, LC2, LC3, LC4, LC5 for containing liquid. (where the farm system than has a plurality of tanks contain liquid that is monitor by a control room, where the field tanks are the filed devices are being monitor by the controller, col. 1 ll.9-27; col. 2 ll. 15-47)

At the time of invention, it would have been obvious to a person of ordinary skilled in the art to use the teaching of Westfield of "the farm system than has a plurality of tanks contain liquid that is monitor by a control room" into Packwood. The suggestion/motivation would have been to use to system in a farm in order to monitor the liquid tanks parameters/behaviors such as pressure, temperature, etc. (col. 1 ll.9-27; col. 2 ll. 15-47).

Conclusion

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSE VILLA whose telephone number is (571)270-5689. The examiner can normally be reached on MON-THUR, 8AM-4:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DERRICK FERRIS can be reached on (571)272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. V./
Examiner, Art Unit 2463

/Derrick W Ferris/
Supervisory Patent Examiner, Art Unit 2463